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AN EFFICIENT METHOD FOR THE SYNTHESIS OF DIHYDROPYRIMIDINES USING BRØNSTED ACIDIC IONIC LIQUID: A SOLVENT AND HEATING FREE REACTION

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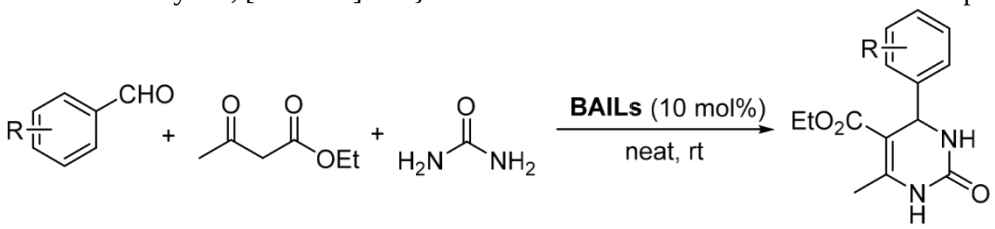
Abstract. Dihydropyrimidinones occupy a considerable position in the dominion of natural and synthetic organic chemistry, due to their various therapeutic and pharmacological properties, such as antiviral, antibacterial, antihypertensive and antitumor effects.[1] Dihydropyrimidinones scaffold rose as mainstay of several drugs which are used as calcium channel blockers.[2] Recently, isolated marine alkaloids have been connected with dihydropyrimidine-5-carboxylate core and found to be potent to HIV-gp-120 CD4 inhibitors.[3] Years back, Biginelli reported the most simple and straight forward procedure for the synthesis of DHPMs.[4] However, From bingeing, many methods have been developed for the synthesis of DHPMs and its derivative using various types of catalytic reagents.[5] Considering the synthetic importance of Dihydropyrimidinones we developed an efficient and greener method for the synthesis of these compounds using Brønsted acidic ionic liquid (BAILs) {1-Butane sulfonic acid-3-methylimidazolium tosylate, [BSMIM]OTs} under solvent free condition and at room temperature (Scheme 1).



Scheme 1. Synthesis of Dihydropyrimidinones using BAILs

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